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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,297	06/28/2001	Joachim Sachs	52275-00005USPX	7602

7590 05/10/2005

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EXAMINER

DAVIS, CYNTHIA L

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/894,297	Applicant(s) SACHS ET AL.	
	Examiner Cynthia L Davis	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 17-34 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/28/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/28/01</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. This action replaces the non-final rejection mailed on January 11, 2005.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-13 and 17-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Pasternak.

Regarding claim 1, a layered protocol stack, wherein data packets are processed on an upper protocol layer and said processing is controlled according to at least one timer of the upper protocol layer, wherein the data packets are forwarded to a lower protocol layer for transmission, wherein said transmission is controlled by the lower protocol layer and the transmission is performed with variable channel access delays is disclosed in Pasternak, figure 10 (showing a protocol layer stack where the transmission is done by the lowest layer, and other operations are done by higher layers). Detecting the start of a transmission by the lower protocol layer is disclosed in column 9, lines 23-30 (the end of the transmission of a cell may be equivalent in time to

the start of transmission of another cell). Notifying the upper protocol layer by the lower protocol layer when a transmission is started, and synchronizing at least one timer of the upper protocol layer according to the notification is disclosed in column 9, lines 23-30 (there must be some sort of notification in order to know when to clear the clock, and since the clock is cleared, it is synchronized) and figure 10 (the transmission is done by the lowest layer; the synchronization timing is done at a higher layer).

Regarding claim 3, a layered protocol stack, wherein data packets are processed on an upper protocol layer and are forwarded to a lower protocol layer controlling the transmission, transmissions are performed with a channel access delay and at least one of the layers performs a scheduling of data packets for the transmission is disclosed in Pasternak, figure 10 (showing a protocol layer stack where the transmission is done by the lowest layer, and other operations are done by higher layers). Scheduling of first data packets for transmission, detecting a channel access delay on the lower layer, performing a check to determine whether additional data packets are ready for forwarding to the lower layer at or before the end of the channel access delay, performing a further scheduling of the first and additional data packets, and transmitting the data packets according to the further scheduling is disclosed in column 9, lines 23-30 (channel access delay is detected when the timer expires; the queue status indicates additional data packets, all packets are scheduled and transmitted).

Regarding claim 17, a layered protocol stack, wherein data packets are processed on an upper protocol layer and said processing is controlled according to at least one timer of the upper protocol layer, wherein the data packets are forwarded to a

Art Unit: 2665

lower protocol layer for transmission, wherein said transmission is controlled by the lower protocol layer and the transmission is performed with variable channel access delays is disclosed in Pasternak, figure 10 (showing a protocol layer stack where the transmission is done by the lowest layer, and other operations are done by higher layers). Means for detecting the start of a transmission by the lower protocol layer is disclosed in column 9, lines 23-30 (the end of the transmission of a cell may be equivalent in time to the start of transmission of another cell). Means for notifying the upper protocol layer by the lower protocol layer when a transmission is started, and means for synchronizing at least one timer of the upper protocol layer according to the notification is disclosed in column 9, lines 23-30 (there must be some sort of notification in order to know when to clear the clock, and since the clock is cleared, it is synchronized) and figure 10 (the transmission is done by the lowest layer; the synchronization timing is done at a higher layer).

Regarding claim 28, a layered protocol stack, wherein data packets are processed on an upper protocol layer and are forwarded to a lower protocol layer controlling the transmission, transmissions are performed with a channel access delay and at least one of the layers performs a scheduling of data packets for the transmission is disclosed in Pasternak, figure 10 (showing a protocol layer stack where the transmission is done by the lowest layer, and other operations are done by higher layers). Means for scheduling of first data packets for transmission, means for detecting a channel access delay on the lower layer, means for performing a check to determine whether additional data packets are ready for forwarding to the lower layer at or before

the end of the channel access delay, means for performing a further scheduling of the first and additional data packets, and means for transmitting the data packets according to the further scheduling is disclosed in column 9, lines 23-30 (channel access delay is detected when the timer expires; the queue status indicates additional data packets, all packets are scheduled and transmitted).

Regarding claims 2 and 19, the timer models a round-trip time or a back-off time is disclosed in Pasternak, column 9, lines 28-30 (back-off time).

Regarding claims 4 and 29, the scheduling being performed on the upper layer and a notification of the channel access delay by the lower layer initiates the further scheduling is disclosed in column 9, lines 23-30 (the upper layer does the scheduling; when delay is detected a slot is selected, which schedules transmission).

Regarding claims 5 and 30, at least one scheduling being performed on the lower layer is disclosed in column 9, lines 23-30 (the lowest layer participates in scheduling; it must cooperate with the higher level in the transmission step).

Regarding claims 6, 24, and 31, a notification being sent at the start of a transmission or at the end of a delay is disclosed in column 9, lines 23-30 (the end of the transmission of a cell may be equivalent in time to the start of transmission of another cell).

Regarding claims 7, 21, and 32, a total channel access delay comprises at least two separate components and a notification is sent between the at least two separate components is disclosed in column 9, lines 10-12 (the ST's and the base station

communicate as to queue status, which would involve notifying the base station regarding delay).

Regarding claims 8, 22, and 33, the channel access delay includes a component of arbitrary length and at least one of a notification and a scheduling is performed before the component of arbitrary length is disclosed in column 9, lines 26-28 (choice of a randomly chosen slot gives the delay an arbitrary component).

Regarding claims 9, 23, and 34, a scheduling process is finished immediately before the scheduled data packets are transmitted is disclosed in column 9, lines 23-30 (the scheduling occurs before transmission).

Regarding claims 10 and 24, a notification is a primitive is disclosed in column 8, lines 35 (the MAC is made of up primitives).

Regarding claims 11 and 25, the lower protocol layer is a medium access control sub-layer of a data link layer is disclosed in column 8, lines 7-13, and figure 10.

Regarding claims 12 and 26, the upper protocol layer is a radio link control sub-layer of a data link layer is disclosed in figure 2 (the system is a wireless network with radio links).

Regarding claims 13 and 27, the transmission is performed on a channel that can be shared by at least one of a plurality of several users and data flows is disclosed in figure 2 (the system is a wireless network with multiple subscriber terminals transmitting on the same channels.).

Regarding claim 18, at least one of a user equipment and a network node is disclosed in figure 2 (showing subscriber units, which are user equipment, and a base station/ATM switch, which is a network node).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

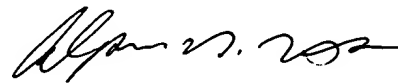
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLD

3/23/2004

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3/23/04



ALPUS H. HSU
PRIMARY EXAMINER